

The Examiner asserts that Chakrabarti et al. discloses a lighting reflector comprised of plastic on which a reflecting layer is formed. With regards to the reflector being comprised of a thermoplastic resin containing an alicyclic structure, the Examiner asserts that it would have been obvious to have the reflector made of a thermoplastic resin containing an alicyclic structure, since it is well known that a thermoplastic resin is a polycarbonate as plastic is and it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

Claims 2-11 are rejected under 35 U.S.C. §103(a) as being unpatentable over Chakrabarti et al. applied to claim 1 above, and further in view of Riser et al. The Examiner asserts that Chakrabarti et al. discloses the above-mentioned reflector. The Examiner asserts that Riser et al. discloses a reflector with a lens for condensing light of a light source reflected by said reflector; a lamp cover allowing passage of light of a light source reflected by said reflector; a lamp cap covering part or all of a light source; a light guide having a light incident face to which is introduced at least one type of light selected from the group of light from a light source and light from a light source reflected by a reflector; and an emission face emitting the incident light introduced from the incident surface to the outside.

Applicants respectfully disagree with the rejection, because the cited references do not teach or suggest all the limitations of the claims, and there is no clear suggestion to change the cited references to utilize the claimed material.

Applicants enclose copies of data sheets from GE USA and Phillips, which show the materials "RYTON" and "ULTEM 4006" as used in Chakrabarti et al. The disclosed product "RYTON" of Chakrabarti et al. (col. 8, line 19) is PPS (polyphenylene sulfide). The disclosed product "ULTEM 4006" of Chakrabarti et al. (line 20) is PEI (polyether imide). Neither of these products contain the alicyclic structure.

Neither Chakrabarti et al. nor Riser et al. disclose a thermoplastic resin containing an alicyclic structure. Applicants note that while it is well known that a thermoplastic resin is a PC (polycarbonate) as plastic, but the PC does not contain the alicyclic structure.

The Examiner asserts that it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice.

However, Applicants respectfully note that there is not shown any suggestion, outside the present specification, that the claimed alicyclic material is suitable for the intended purpose of the invention. While it is presently clear in hindsight that the claimed material is suitable for the intended purpose, it is not clear from the cited references or from the known art that such material would have been known to be especially suitable for the intended purpose at the time of the invention.

For at least the foregoing reasons, Applicants submit that the claimed invention of claims 1-11 distinguishes over the cited art and defines patentable subject matter. Favorable reconsideration is earnestly solicited.

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Inventors: Teiji KOHARA

Examiner: Anabel Ton  
Group Art Unit: 2875

Should the Examiner deem that any further action by Applicants would be desirable to place the application in condition for allowance, the Examiner is encouraged to telephone Applicants' undersigned attorney.

In the event that this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees which may be due with respect to this paper, may be charged to Deposit Account No. 01-2340.

Respectfully submitted,

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Enclosures: Copies of data sheets from GE USA and Phillips

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グレードコード	樹脂タイプ	説明	補足
CM0081	ABS	Cycolac AM	—
CM0095	ABS	Cycolac G100	—
CM0102	ABS	Cycolac GPM1	—
CM0120	ABS	Cycolac LXB	—
CM0123	ABS	Cycolac TC1.607	—
CM2209	ABS	Cycolac G364	—
CM2577	ABS	Cycolac 28818E	—
CM3146	ABS	Cycolac GPM4	—
CM3290	ABS	Cycolac CTB 3505	—
CM3291	ABS	Cycolac DFAR 1000	—
CM3292	ABS	Cycolac GHT4400-1000	—
CM3293	ABS	Cycolac T-1000	—
CM3294	ABS	Cycolac X11-1000	—
CM3976	ABS	Cycolac G500	—
CM4251	ABS	Cycolac GDM3500	—
CM4526	ABS	Cycolac G121	—
CM4651	ABS	Cycolac V100	—
CM4810	ABS	Cycolac XS703	—
CM4868	ABS	Cycolac T-XS30001	—
CM4995	ABS	Cycolac G380	—
CM5678	ABS	Cycolac BDT5510	—
CM5679	ABS	Cycolac BDT6500	—
CM5706	ABS	Cycolac DFAR	—
CM5726	ABS	Cycolac EPBM	—
CM5728	ABS	Cycolac ETS	—
CM5741	ABS	Cycolac GPM7300	—
CM5884	ABS	Cycolac VW300	—
CM5885	ABS	Cycolac VW55	—
CM7062	ABS	Cycolac GRT3370	Glass(15)
CM8115	ABS	Cycolac 29254E	—
G10006	ABS	Cycolac CTB	—
G10007	ABS	Cycolac X11	—
G10008	ABS	Cycolac DFA-R	—
G10009	ABS	Cycolac GHT4400	—
G10010	ABS	Cycolac GPT2	—
G10012	ABS	Cycolac GSE	—

CM8624	PC+ABS	Cycoloy C2100HF	—
CM8910	PC+ABS	Cycoloy C1200HFM	Metal Flakes
G10209	PC+ABS	Cycoloy C2950 HF-71678	—
CM0324	PC+PBT	Xenoy DX1800	—
CM2678	PC+PBT	Xenoy NBX-097	Glass(30)
CM2954	PC+PBT	Xenoy 1730	—
CM3308	PC+PBT	Xenoy 5720-1001	—
CM3309	PC+PBT	Xenoy 6120-1001	—
CM4380	PC+PBT	Xenoy CL 100	—
CM4381	PC+PBT	Xenoy CL 300	—
CM4641	PC+PBT	Xenoy CL101	—
CM9100	PC+PBT	Xenoy 1103	—
GE6200	PC+PBT	Xenoy 2230	—
GE6460	PC+PBT	Xenoy 4600R	—
GE6473	PC+PBT	Xenoy 1731	—
CM0782	PEI	Ultem 2210	Glass(20)
CM0793	PEI	Ultem D8007	—
CM0794	PEI	Ultem D8480	—
CM2250	PEI	Ultem 1110F	—
CM4780	PEI	Ultem CRS5711	Glass(15)
CM5758	PEI	Ultem HTX1010F	—
CM5834	PEI	Ultem 1010R	—
CM5845	PEI	Ultem 6202	Mineral(20)
CM5848	PEI	Ultem AR9100	Glass(10)
CM5849	PEI	Ultem AR9200	Glass(20)
CM5850	PEI	Ultem AR9300	Glass(30)
GE4100	PEI	Ultem 1000	—
GE4101	PEI	Ultem 1010	—
GE4102	PEI	Ultem 2100	Glass(10)
GE4103	PEI	Ultem 2200	Glass(20)
GE4104	PEI	Ultem 2212	Glass(20)
GE4105	PEI	Ultem 2240	Glass(20)
GE4106	PEI	Ultem 2300	Glass(30)
GE4107	PEI	Ultem 2310	Glass(30)
GE4108	PEI	Ultem 2312	Glass(30)
GE4109	PEI	Ultem 2340	Glass(30)
GE4110	PEI	Ultem 2342	Glass(30)
GE4111	PEI	Ultem 2400	Glass(40)
GE4112	PEI	Ultem 2440	Glass(40)
GE4113	PEI	Ultem 3453	—
GE4114	PEI	Ultem 3455	—

サプライヤ: PHILLIPS (Chevron Phillips)

グレードコード	樹脂タイプ	説明	補足
CM0400	HDPE	Marlex HMN50100	—
CM2800	HDPE	HID-9018T	—
CM2801	HDPE	HID-9035T	—
CM2817	HDPE	Marlex HHM5502	—
CM3579	HDPE	HID-9055	—
CM3932	HDPE	HID 9018	—
CM3933	HDPE	HID 9506	—
CM4372	HDPE	9012T	—
CM6664	HDPE	Marlex H-516	—
PH1001	HDPE	Marlex HMN4550	—
PH1002	HDPE	Marlex HMN5060	—
PH1003	HDPE	Marlex HMN6060	—
PH1004	HDPE	Marlex HMN5580	—
PH1006	HDPE	Marlex HMN55180	—
CM9115	HIPS	MB6800	—
CM9116	HIPS	MC6800	—
CM9117	HIPS	MD9520	—
CM9118	HIPS	MC9540	—
CM9119	HIPS	EA6740	—
CM4000	LDPE	KN-226	—
CM4076	LDPE	PE 1007	—
CM3682	PE	Marlex TR-438	—
PH1101	PP	Marlex HGL-050-01	—
PH1102	PP	Marlex HLN-120-01	—
PH1103	PP	Marlex HLN-200	—
PH1104	PP	Marlex HLN-350	—
PH1105	PP	Marlex HGL-120-01	—
CM2497	PPS	Ryton R-4	Glass(40)
CM2503	PPS	Ryton R-7	Glass(60)&Mineral
CM2547	PPS	Ryton R-10-5002C	Glass(60)&Mineral
CM2811	PPS	Ryton R-4-04LV	Glass(40)
CM3968	PPS	Ryton BR42B	Glass(40)
CM4354	PPS	Ryton BR111-BL	Glass(60)&Mineral
CM6737	PPS	Ryton PPS R-4-230NA	Glass(40)
CM6819	PPS	Ryton R-4-02XT (fc pVT)	Glass(40)
CM7268	PPS	Xtel XK2040 (Natural COLOR)	Glass(40)

	(変性方法としては共重合なども可能であるが、一般的にはポリマーアロイによることが多い)	
ポリフェニレンサルファイド	パラジクロルベンゼンと硫化ナトリウムを反応させて得られる。ベンゼン環とイオウが交互に連結して主鎖を形成した構造の熱可塑性樹脂	$\left[ \text{C}_6\text{H}_4\text{--S} \right]_n$
ポリエーテルエーテルケトン	ハイドロキノンと4,4'-ジフルオロベンゾイルでフェノレート化し、ついでこれを重合させたりして得られる、フェニルケトンとフェニルエーテルの組み合わせ構造から成る熱可塑性樹脂。	$\left[ \text{O--C}_6\text{H}_4\text{--O--C}_6\text{H}_4\text{--CO--C}_6\text{H}_4 \right]_n$
ポリエーテルスルホン	ジクロロジフェニルスルホンを重縮合させて得られる。パラフェニレン基とエーテル基が交互に結合した構造を有する熱可塑性樹脂	$\left[ \text{C}_6\text{H}_4\text{--SO}_2\text{--C}_6\text{H}_4\text{--O} \right]_n$
ポリスルホン	ビスフェノールAのナトリウム塩と4,4'-ジクロロジフェニルスルホンを重縮合させたりして得られる、ジフェニルスルホン基をもった熱可塑性樹脂	$\left[ \text{O--C}_6\text{H}_4\text{--C(CH}_3)_2\text{--C}_6\text{H}_4\text{--O--C}_6\text{H}_4\text{--SO}_2\text{--C}_6\text{H}_4 \right]_n$
ポリアミドイミド	無水トリメリット酸とジアミンを重合させたりして得られる、ベンゼン環とイミド結合の組み合わせ構造をもった熱可塑性樹脂。 (一部に熱硬化性樹脂もある。)	$\left[ \text{CO--C}_6\text{H}_4\text{--CO--N--C}_6\text{H}_4\text{--O--C}_6\text{H}_4\text{--NH} \right]_n$
ポリエーテルイミド	芳香族ビス・エーテル無水物とジアミンを反応させて得られる、エーテル基とイミド基をもった熱可塑性樹脂	$\left[ \text{N--CO--C}_6\text{H}_4\text{--O--C}_6\text{H}_4\text{--C(CH}_3)_2\text{--C}_6\text{H}_4\text{--O--C}_6\text{H}_4\text{--CO--N--C}_6\text{H}_4 \right]_n$